IN THE CLAIMS

Please amend the claims as follows:

Claims 1-26 (Canceled).

Claim 27 (Currently Amended). A method of sealing a first wafer and a second wafer each made of semiconducting materials, comprising:

implanting a metallic species in at least the first wafer at a dose above 10^{16} species/cm^2,

assembling the first wafer and the second wafer by molecular bonding, and

after the molecular bonding, forming a metallic ohmic contact including alloys formed between the implanted metallic species and the semiconducting materials of the first wafer and the second wafer, said metallic ohmic contact being formed at an assembly interface between the first wafer and the second wafer,

wherein the forming includes causing the implanted metallic species to diffuse towards the interface between the first wafer with the second wafer and beyond the interface.

Claim 28 (Previously Presented). The method according to claim 27, wherein the forming includes applying a heat treatment at a temperature equal at least to a formation temperature of the said alloys .

Claim 29 (Previously Presented). The method according to claim 27, wherein the implanting includes implanting the metallic species at a depth of between 5 nm and 20 nm under a surface of the first wafer.

Claim 30 (Canceled).

Claim 31 (Previously Presented). The method according to claim 27, further comprising:

processing the first wafer to make all or part of a surface layer of the first wafer amorphous.

Claim 32 (Previously Presented). The method according to claim 31, wherein the processing includes depositing an amorphous material layer before and/or after implantation of the metallic species.

Claim 33 (Previously Presented). The method according to claim 31, wherein the processing includes implanting hydrogen.

Claim 34 (Previously Presented). The method according to claim 27, wherein the first wafer and the second wafer are made from a material chosen from among silicon, gallium arsenide (GaAs), SiC (silicon carbide), InP (Indium phosphide), Germanium (Ge), or silicon-Germanium (SiGe).

Claim 35 (Previously Presented). The method according to claim 27, wherein the implanted species includes one or more of Nickel, palladium, Cobalt, Platinum, Tantalum, Tungsten, Titanium, or Copper.

Claim 36 (Previously Presented). The method according to claim 27, wherein at least one of the wafers is a heterostructure.

Claim 37 (Previously Presented). The method according to claim 27, further comprising:

thinning at least one of the wafers after the assembling or after the forming of the metallic compounds.

Claim 38 (Previously Presented). The method according to claim 27, wherein at least one of the wafers is a debondable structure.

Claim 39 (Previously Presented). The method according to claim 27, wherein at least one of the wafers includes a weakening plane.

Claim 40 (Previously Presented). The method according to claim 39, further comprising:

thinning the wafer including the weakening plane d by fracture along said weakening plane, after the assembling or after the forming of the metallic compounds.

Claim 41 (Previously Presented). The method according to claim 27, wherein at least one of the wafers includes at least one circuit or circuit layer.

Claim 42 (Previously Presented). The method according to claim 27, wherein the implanting includes using a mask to obtain local implantation zones.

Claim 43 (Previously Presented). The method according to claim 27, further comprising:

forming an insulating layer on the first wafer, before the implanting.

Claim 44 (Previously Presented). The method according to claim 27, further comprising:

thinning the first wafer after implantation of the metallic species.

Claim 45 (Previously Presented). The method according to claim 27, wherein the first wafer includes at least one insulating zone located at a surface so as to obtain local implantation zones.

Claims 46-52 (Canceled).

Claim 53 (Currently Amended). A method of sealing a first wafer and a second wafer each made of semiconducting materials, comprising:

implanting a metallic species in at least the first wafer, at a depth of between 5 nm and 20 nm under a surface of said first wafer, at a dose ~~of between 10^{14} and 10^{18} species/cm^2~~ above 10^{16} species/cm^2,

assembling the first wafer and the second wafer by molecular bonding,

after the molecular bonding, forming a metallic ohmic contact including alloys formed between the implanted metallic species and the semiconducting materials of the first wafer and the second wafer, said metallic ohmic contact being disposed at an assembly interface between the first wafer and the second wafer,

wherein the forming includes causing the implanted metallic species to diffuse towards the interface between the first wafer with the second wafer and beyond the interface.

Claim 54 (Previously Presented). The method according to claim 53, wherein the forming includes applying a heat treatment at a temperature equal at least to a formation temperature of the said metallic compounds.

Claim 55 (Previously Presented). The method according to claim 53, further comprising:

processing the first wafer to make all or part of a surface layer of the first wafer amorphous.

Claim 56 (Previously Presented). The method according to claim 55, wherein the processing further comprises depositing an amorphous material layer before and/or after implantation of the metallic species.

Claim 57 (Previously Presented). The method according to claim 55, wherein the processing includes implanting hydrogen.

Claim 58 (Previously Presented): A structure obtained by the method of claim 27, wherein the metallic compounds include at least one metal chosen from among nickel, palladium, cobalt, platinum, tantalum, titanium, or copper.

Claim 59 (Previously Presented): The structure according to claim 58, wherein the semiconducting materials are selected from among Si, GaAs, SiC, InP, or SiGe.

Claim 60 (Previously Presented): The structure according to claim 58, wherein at least one of the substrates is a heterostructure.

Claim 61 (Previously Presented): The structure according to claim 58, wherein at least one of the substrates is a thin film.

Claim 62 (Previously Presented): The structure according to claim 58, wherein at least one of the substrates includes one or more of electronic, optical, or mechanical components.

Claim 63 (Previously Presented): The structure according to claim 58, wherein one of the substrates is a thin film made of silicon comprising RF circuits.

Claim 64 (Previously Presented): The structure according to claim 63, wherein the other substrate is made of high resistivity silicon.

Claim 65 (New). A method of sealing a first wafer and a second wafer each made of semiconducting materials, comprising:

implanting a metallic species in at least the first wafer at a dose above 10^{16} species/cm^2,

assembling the first wafer and the second wafer by molecular bonding, wherein the first wafer and the second wafer include silicon, and

after the molecular bonding, forming a metallic ohmic contact including a silicide alloy formed between the implanted metallic species and the semiconducting materials of the

first wafer and the second wafer, said metallic ohmic contact being formed at an assembly interface between the first wafer and the second wafer,

wherein the forming includes causing the implanted metallic species to diffuse towards the interface between the first wafer with the second wafer and beyond the interface.